

**Notice of Allowability**

Application No.

09/932,731

Examiner

Robert Sellers

Applicant(s)

ROTH ET AL.

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed November 7, 2003.
2. ☒ The allowed claim(s) is/are 9-41.
3. ☐ The drawings filed on \_\_\_\_\_ are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
  - \* Certified copies not received: \_\_\_\_\_.
5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
  - (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No. \_\_\_\_\_.
  - (b) ☐ including changes required by the proposed drawing correction filed \_\_\_\_\_, which has been approved by the Examiner.
  - (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the margin according to 37 CFR 1.121(d).

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1 <input type="checkbox"/> Notice of References Cited (PTO-892)   | 5 <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)                 |
| 2 <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 6 <input checked="" type="checkbox"/> Interview Summary (PTO-413), Paper No. <u>1103</u> . |
| 3 <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br><u>Paper No. 2/15/03.</u> | 7 <input checked="" type="checkbox"/> Examiner's Amendment/Comment                         |
| 4 <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                     | 8 <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance        |
|   | 9 <input type="checkbox"/> Other   |

Robert Sellers  
Primary Examiner  
Art Unit: 1712

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Kristin Neuman on December 1, 2003.

The application has been amended as follows:

Change the title to: -EPOXY ACRYLATE OF AROMATIC BIPHENOL-  
ADVANCED EPOXY RESIN REACTED WITH ANHYDRIDE--.

Specification, page 1, line 1, insert --This application is a continuation of application no. 08/268,094 filed June 28, 1994, abandoned.--.

Specification, page 1, line 2; page 2, line 12; page 3, line 2; page 9, line 16; page 10, line 19; page 13, line 16; page 27, line 23 and page 28, lines 4 and 21:  
Delete each occurrence of "novel".

Claim 9, line 3, formula IV, amend "N" to --n--.

Cancel claims 1-4 and 7.

Replace the abstract with the following new one presented on a separate page.

The following is an examiner's statement of reasons for allowance:

The insertion into claims 9, 10, 25, 26 and 41 of the limitation suggested on page 4, the last paragraph of the non-Final rejection mailed February 27, 2003 overcomes the 35 U.S.C. 112, first paragraph, rejection.

The affirmative steps of mixing of the carboxyl group-containing epoxy acrylate of formula IV with a photoinitiator in the method of preparation of a photoresist formulation of independent claim 25 resolves the 35 U.S.C. 112, second paragraph, rejection.

The 35 U.S.C. 102(a) or 103(a) rejection over Japanese Patent No. 5-32746 is rescinded due to the limitation of the cyclic anhydride of a polycarboxylic acid represented by R<sub>3</sub> in formula IV to succinic anhydride which is not recited.

The Japanese patent on page 16, lines 3-4; page 24, Synthetic Example 6; page 25, Synthetic Examples 7 and 8; page 26 Synthetic Example 9; and pages 26-27, Synthetic Example 10 discloses and shows maleic, phthalic, tetrahydrophthalic or hexahydrophthalic acid or anhydride. There is no motivation to employ the claimed succinic anhydride as the polycarboxylic acid anhydride reactant for the epoxy acrylate of the Japanese patent to produce the carboxyl group-containing epoxy acrylate of formula IV.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

(703) 308-2399 (Fax no. (703) 872-9306)  
Monday to Friday from 9:30 to 6:00 EST



rs 11/19/03

**ROBERT E. SELLERS II**  
**PRIMARY EXAMINER**

--Abstract of the Disclosure

A carboxyl group-containing epoxy acrylate is prepared by the reaction of an epoxy resin advanced with an aromatic biphenol compound which is reacted with a polycarboxylic acid anhydride in the presence or absence of a catalyst and a polymerization inhibitor at an elevated temperature. The carboxyl group-containing epoxy acrylate is mixed with a photoinitiator to obtain a photoresist formulation.--.